

# 40 C.F.R. § 141.852

## Analytical methods and laboratory certification.

(a) *Analytical methodology.* (1) The standard sample volume required for analysis, regardless of analytical method used, is 100 ml.

(2) Systems need only determine the presence or absence of total coliforms and *E. coli*; a determination of density is not required.

(3) The time from sample collection to initiation of test medium incubation may not exceed 30 hours. Systems are encouraged but not required to hold samples below 10 deg. C during transit.

(4) If water having residual chlorine (measured as free, combined, or total chlorine) is to be analyzed, sufficient sodium thiosulfate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) must be added to the sample bottle before sterilization to neutralize any residual chlorine in the water sample. Dechlorination procedures are addressed in Section 9060A.2 of *Standard Methods for the Examination of Water and Wastewater* (20th and 21st editions).

(5) Systems must conduct total coliform and *E. coli* analyses in accordance with one of the analytical methods in the following table or one of the alternative methods listed in Appendix A to subpart C of part 141.

Organism	Methodology category	Method <sup>1</sup>	Citation <sup>1</sup>
Total Coliforms			
	Lactose Fermentation Methods	Standard Total Coliform Fermentation Technique	Standard Methods 9221 B.1, B.2 (20th ed.; 21st ed.). <sup>2 3</sup>
			Standard Methods Online 9221 B.1, B.2-99. <sup>2 3</sup>
		Presence-Absence (P-A) Coliform Test	Standard Methods 9221 D.1, D.2 (20th ed.; 21st ed.). <sup>2 7</sup>
			Standard Methods Online 9221 D.1, D.2-99. <sup>2 7</sup>
	Membrane Filtration Methods	Standard Total Coliform Membrane Filter Procedure	Standard Methods 9222 B, C (20th ed.; 21st ed.). <sup>2 4</sup>
			Standard Methods Online 9222 B-97 <sup>2</sup> 4, 9222 C-97. <sup>2 4</sup>

		Membrane Filtration using MI medium	EPA Method 1604.2
		m-ColiBlue24® Test 2.4	
		Chromocult 2.4	
	Enzyme Substrate Methods	Colilert®	Standard Methods 9223 B (20th ed.; 21st ed.). 2.5
			Standard Methods Online 9223 B-97.2.5
		Colisure®	Standard Methods 9223 B (20th ed.; 21st ed.). 2.5.6
			Standard Methods Online 9223 B-97.2.5.6
		E*Colite® Test 2	
		Readycult® Test 2	
		modified Colitag® Test 2	
<i>Escherichia coli</i>			
	<i>Escherichia coli</i> Procedure (following Lactose Fermentation Methods)	EC-MUG medium	Standard Methods 9221 F.1 (20th ed.; 21st ed.) 2
	<i>Escherichia coli</i> Partition Method	EC broth with MUG (EC-MUG)	Standard Methods 9222 G.1c(2) (20th ed.; 21st ed.) 2.8
		NA-MUG medium	Standard Methods 9222 G.1c(1) (20th ed.; 21st ed.) 2
	Membrane Filtration Methods	Membrane Filtration using MI medium m-ColiBlue24® Test 2.4	EPA Method 1604.2
		Chromocult 2.4	
	Enzyme Substrate Methods	Colilert®	Standard Methods 9223 B (20th ed.; 21st ed.) 2.5
			Standard Methods Online 9223 B-97.2.5.6

		Colisure®	Standard Methods 9223 B (20th ed.; 21st ed.) 2 5 6
			Standard Methods Online 9223 B-972 5 6
		E*Colite® Test 2	
		Readcult® Test 2	
		modified Colitag® Test 2	

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